

WHAT IS CLAIMED IS:

A3 1. A method of printing with a rotary printing press having a plurality of printing cylinders that are adapted to be adjusted on and off from a running web, 5 wherein a length of a printed image is larger than a peripheral length of the largest one of the printing cylinders, the method comprising the steps of:
- subdividing the printed image into elements, and
- printing these elements with different printing cylinders, wherein at least one of said printing cylinders is periodically shifted off from the web, each time 10 for at least a duration of one turn of the printing cylinder.

2. The method of claim 1, wherein the printed image consists of a number of subsequent panels, said panels having at least one element that is different from panel to panel, and wherein these elements are printed with a plurality of printing cylinders, whereby each printing cylinder prints one or more of said elements, and "on" and "off" adjustment movements of the printing cylinders are timed such that each printing cylinder leaves those panels empty for which the elements are printed with another one of the printing cylinders. 15

20 3. The method of claim 2, wherein the printed image has an element that is identically repeated for each panel, and this element is printed with a separate printing cylinder which remains constantly in the "on" position.

25 4. The method of claim 1, wherein a plurality of printing cylinders are adjusted "on" and "off" at timings that are offset in such a manner that an "on" adjustment of one printing cylinder occurs at the same longitudinal register as an "off" adjustment of another printing cylinder, so that the elements printed by these printing cylinders are in registry and form, in combination, an integral pattern.

30 5. The method of claim 1, wherein elements having a length of less than the peripheral length of the printing cylinder, as measured in a feed direction of the web, are printed with a single printing cylinder, and wherein the "on" adjustments of this printing cylinder are timed such that the element printed thereby is inserted into the printed image in a predetermined position.

35 6. The method of claim 4, wherein elements having a length of less than the peripheral length of the printing cylinder, as measured in a feed direction of the

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web, are printed with a single printing cylinder, and wherein the "on" adjustments of this printing cylinder are timed such that the element printed thereby is inserted into the printed image in a predetermined position.

Cont 5 7. A rotary printing press comprising:
- a plurality of printing cylinders,
- feeding means for feeding a web to be printed,
- a shift mechanism for adjusting the printing cylinders individually on and off from said web, and

10 10. - a control unit adapted to control the shift mechanism for at least one of said plurality of cylinders such that this cylinder is periodically adjusted on and off from the web during the printing operation.

8. The printing press of claim 7, wherein said shift mechanism is adapted to 15 shift said at least one printing cylinder, that is adjusted on and off periodically, between and "on" position and an "off" position within a length of time that is substantially smaller than a rotation period of said printing cylinder.

9. The printing press of claim 7, wherein a distance between said "on" position 20 and said "off" position of said at least one printing cylinder is less than 1 mm.

10. The printing press of claim 8, wherein a distance between said "on" position and said "off" position of said at least one printing cylinder is less than 1 mm.

25 11. The printing press of claim 7, wherein said at least one printing cylinder that is periodically adjustable, has an axle and a drive motor arranged on said axle.

12. The printing press of claim 10, wherein said at least one printing cylinder 30 that is periodically adjustable, has an axle and a drive motor arranged on said axle.